

City of Poughkeepsie, NY

Case of the Small City Early Adopter: One Perspective on the State of Municipal EV Infrastructure

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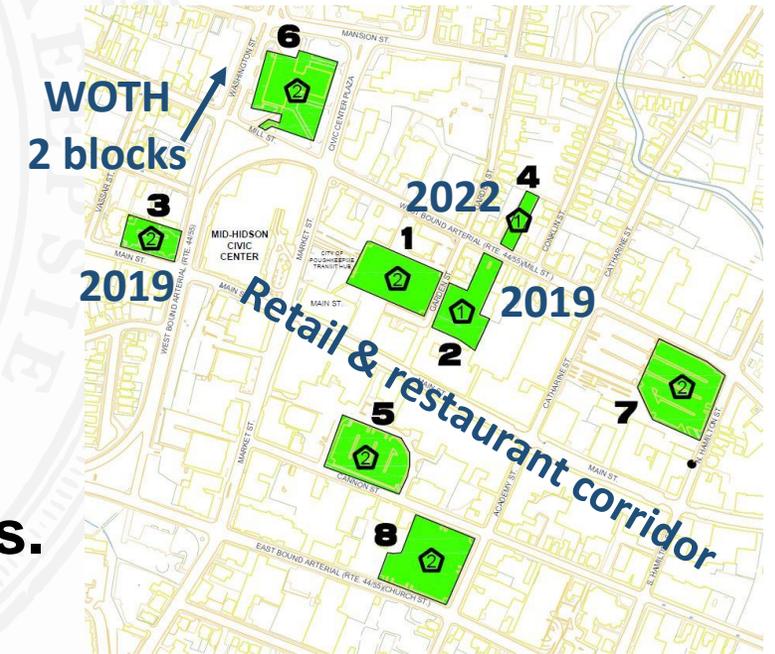
Panelist: Data Interoperability for a Smooth Transition of EV Deployment
(DOE Electricity Advisory Committee: Smart Grid Subcommittee)

Case for EV Charging Stations (EVCS): One “Average” City

- **City of Poughkeepsie, NY:** Pop: 35,000. Location: 90 min to NYC.
- Green bona fides: NY State sponsored climate awareness program.
- Urban center renaissance: public projects \$79M; private development \$1.45B.
- Walkway Over the Hudson River (**WOTH**) State Historic Park.
 - >600,000 visitors annually. Up to 65% percent visit restaurants, retail, tourist (other)
 - >7M visitors, 50 states, 52 countries

State of the City’s EV Infrastructure:

- Initial placement in City owned parking lots
- 2019 – 4 Level 2 stations; 2022 – 2 more
- TBD – 8 to ? more stations Level X
- Small size of city belies true EV charging requirements.



State of the art - inadequate to determine meaningful alternatives for City’s long term EVCS investments.

Preliminary Results:

*Line items & costs are per station/two plugs each

| Line Items 2022* | Costs* | Current Outcomes |
|------------------------------------|----------------|--|
| EV station purchase 2019 (Lvl 2) | \$ (1386) | Obsolescence vs Level 3? |
| Maintenance costs p/yr+ electric | \$ (1472) | Contractor maintenance required. |
| NY State "Charge Ready" \$7,000 | \$ 1,100 | Grant Rebates not available in 2022. |
| Revenue + Econ impact 2022 est | <u>\$ 1356</u> | Significant out year uncertainty. |
| Diff +/- per charging station p/yr | \$ (403) | Without incentives cost ~ (\$1,500) p/sta p/yr |

Uncertainty surrounding cost factors:

- Planning/decision making
- Learning curve error
- Initial Costs/Out year inflation
- Obsolescence/Proprietary providers

Lesson learned: Foreseeable future...EV charging stations are a service provided by the City...not a revenue generating endeavor.

Data Interoperability Enables Muni EVCS Decisions

- **Data interoperability supports complex decision support; mitigates siloed administrative data.**

Notional data made interoperable by Munis during EVCS decision process

| | | |
|-------------------|----------------------------------|---|
| Traffic patterns | Public capital project locations | Public infrastructure maps and system specs |
| Visitors | Inventory parking lots & spaces | Parking capacity and use |
| City planner data | Private sector development | Standards aligned to each use case |
| UC1: Govt owned | UC2: Public/private | UC3: Gov-to-Gov |

Recommendations:

- **Publish and maintain policy implementation guidance for munis.**
 - Provide approved vendors ~ standards, cost avoidance, speed to capability.
- **Help municipalities commit to EV charging infrastructure.**
 - Define high level use cases. Help munis conceptualize who the EVCS serve.
 - Fund incentives. Add addl incentives for qualified urban and rural municipalities.
 - Publish practitioner guides that characterize EVCS participation for municipalities.